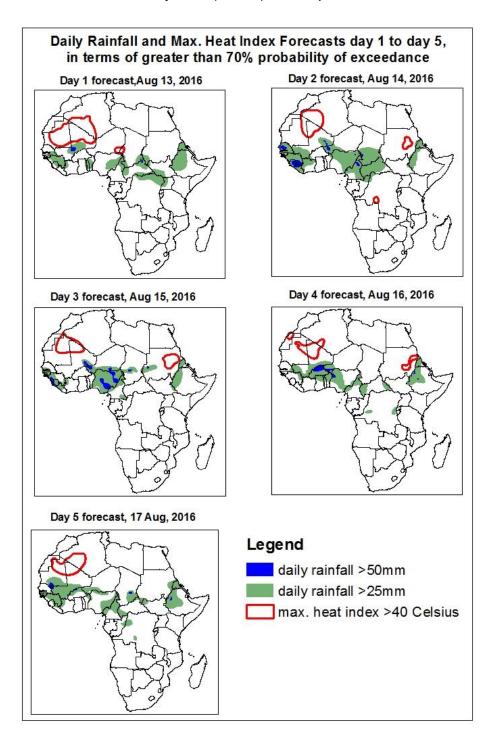
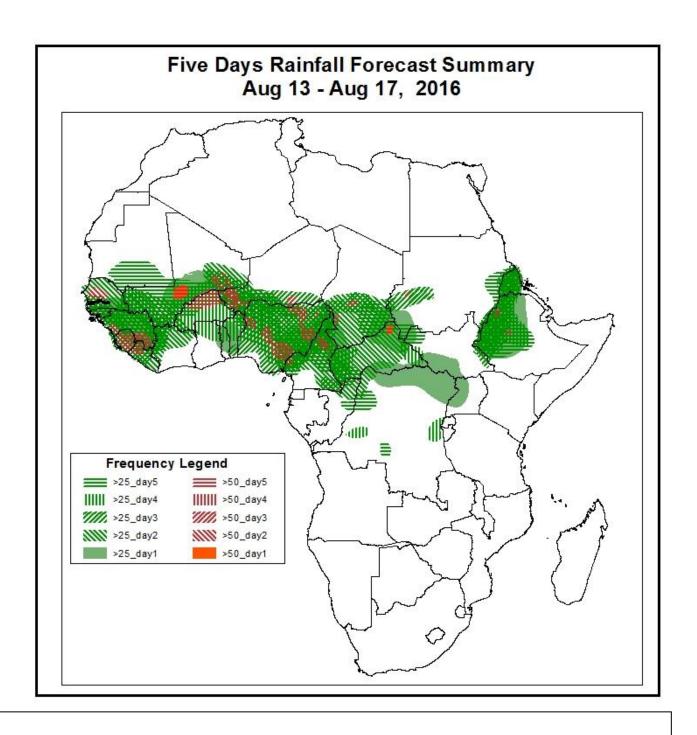
- 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Aug 12, 2016)
- 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Aug 13–Aug 17 2016)
  The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



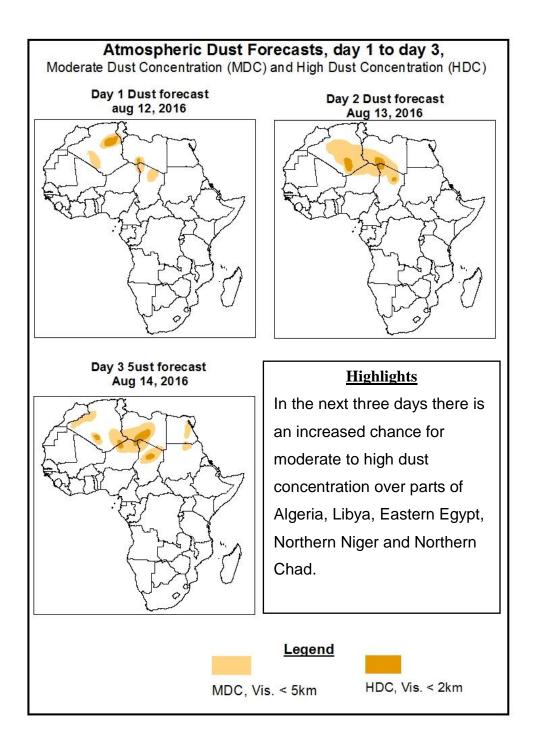


# <u>Highlights</u>

In the next five days, westward propagating lower-level cyclonic systems across West Africa and central Sahel and lower level wind convergences across the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over southern Senegal, much of Guinea Bissau, Guinea and Sierra Leone, portions of Liberia, Mali, Burkina Faso, Cote d'Ivoire, western Niger, Nigeria Chad and Cameroon, local areas of Sudan, portions of Ethiopia, Eritrea and CAR, local areas of DRC.

### 1.2. Atmospheric Dust Concentration Forecasts (valid: Aug 13- Aug 17 2016)

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: Aug 13 – Aug 17, 2016

The Azores high pressure system over the North Atlantic is expected to maintain an average central pressure value of 1026 hPa during the forecast period.

The St. Helena high-pressure system over the Southeast Atlantic Ocean is expected to intensify, with its value of the central pressure increasing from 1024 hPa to 1030 hPa from 24 hours to 96 hours and tends to weaken, with its value of central pressure decreasing from 1030 hPa to 1029 hPa between 96 hours to 120 hours.

The Mascarene High pressure system over the Southeast Atlantic Ocean is expected to intensify, with its value of the central pressure increasing from 1030 hPa to 1035 hPa from 24 hours to 72 hours and tends to weaken, with its value of central pressure decreasing from 1033 hPa to 1032 hPa between 96 hours to 120 hours.

The 1016mb isobar, associated with the East African ridge is expected to remain near the latitudes of Ethiopia during the forecast period.

The heat low over Western Sahel is expected to deepen, with its central pressure value decreasing from 1004 hPa to 1003 hPa between 24 and 48 hours, and tends to fill up, with its central pressure value increasing from 1004 hPa to 1009 hPa between 96 hours to 120 hours. The heat low over Central Sahel is expected to fill up, with its central pressure value increasing from 1007 hPa to 1011 hPa between 24 and 96 hours, and tends to deepen, with its central pressure value decreasing from 1011 hPa to 1008 hPa between 96 hours to 120 hours. The heat low over Sudan is expected to maintain an average central pressure value of 1008hPa during the forecast period.

At 925hPa, an anticyclonic circulation and its associated ridge is expected to prevail across Libya and the neighboring areas. Strong dry northeasterly to easterly winds may lead to moderate to high dust concentration in parts of Algeria, Libya, Eastern Egypt, Northern Niger and Northern Chad.

At 850hPa level, a cyclonic circulation is expected to propagate westwards in the region between Chad and Senegal during the forecast period, while the lower level wind convergence is expected to prevail in the Greater Horn of Africa.

At 700 hPa, a zone of strong easterly flow, with a trough in the easterlies is expected to propagate westward across West Africa during the forecast period.

At 500 hPa, a zone of strong wind (>35kts), associated with AEJ is expected to propagate westwards across West Africa in the region between Western Niger to Senegal.

At 150 hPa A strong wind (> 70 kts), associated with the TEJ is expected to weaken over the Greater Horn of Africa during the forecast period.

In the next five days, westward propagating lower-level cyclonic systems across West Africa and central Sahel and lower level wind convergences across the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over southern Senegal, much of Guinea Bissau, Guinea and Sierra Leone, portions of Liberia, Mali, Burkina Faso, Cote d'Ivoire, western Niger, Nigeria Chad and Cameroon, local areas of Sudan, portions of Ethiopia, Eritrea and CAR, local areas of DRC.

There is an increased chance for maximum heat index to exceed 40°C over portions of Western Sahara, Mauritania, Mali and Algeria, local areas in Niger, Chad and DRC, portion of Sudan.

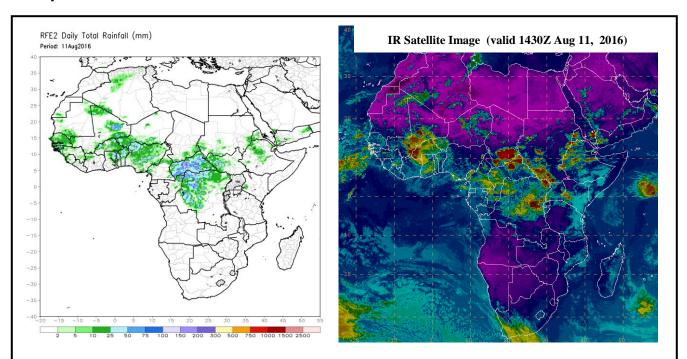
#### 2.0. Previous and Current Day Weather over Africa

#### **2.1. Weather assessment for the previous day** (Aug 11, 2016)

Moderate to locally heavy rainfall was observed over local areas in Senegal, Guinea Bissau and Guinea over portions of Mali, Burkina Faso, Niger, Nigeria, CAR, southern Sudan and DRC, local areas of Ethiopia.

## 2.2. Weather assessment for the current day (Aug 12, 2016)

Intense convective clouds are observed over portion of Burkina Faso Mali, local areas in Nigeria, portions of Chad, CAR DRC, Sudan and Ethiopia, western Eritrea and western Kenya.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

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